

ANSWERS: Crystal ball questions on Primary, secondary and tertiary haloalkanes and alcohols

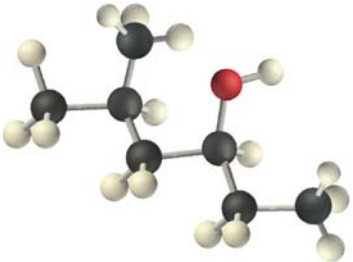
1)

primary	primary	secondary
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2)

$\begin{array}{c} \text{CH}_3 \\ \\ \text{CH}_3\text{CH}_2 - \text{C} - \text{OH} \\ \\ \text{CH}_3 \end{array}$ <p>a tertiary alcohol</p>	<p>2-methylbutan-2-ol</p> <p>The carbon atom that is bonded to the OH is bonded to 3 other carbon atoms, therefore a tertiary alcohol</p>
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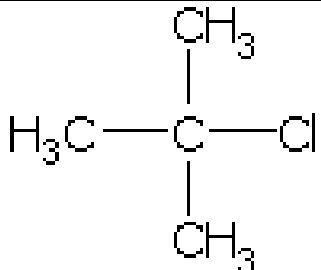
3)

	<p>5-methylhexan-3-ol</p> <p>Secondary alcohol because the carbon atom bonded to the OH is directly bonded to 2 other carbon atoms, therefore a secondary alcohol</p>
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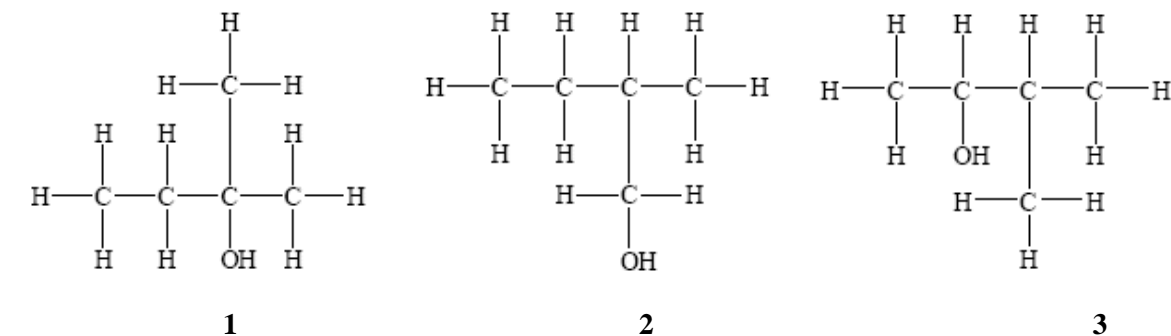
4)

$\begin{array}{ccccccc} & \text{H} & \text{H} & \text{H} & & & \\ & & & & & & \\ \text{H} & - \text{C} & - \text{C} & - \text{C} & - \text{O} & - \text{H} \\ & & & & & & \\ & \text{H} & \text{H} & \text{H} & & & \end{array}$	$\begin{array}{ccccc} & & \text{H} & & \\ & & & & \\ & \text{H} & \text{O} & \text{H} & \\ & & & & \\ \text{H} & - \text{C} & - \text{C} & - \text{C} & - \text{H} \\ & & & & \\ & \text{H} & \text{H} & \text{H} & \end{array}$
propan-1-ol	propan-2-ol
primary	secondary

5)

	<p>2-chloro-2-methylpropane</p> <p>Tertiary because the carbon atom bonded to the Cl is bonded to 3 other C atoms</p>
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6) Which is the correct classification of these alcohols (answer A, B, C or D)



Answer B	tertiary	primary	secondary
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7) 1,1,2-tribromoethane. This is a primary haloalkane as the carbon atom bonded to the Br atom (any one of the 3 Br atoms) is bonded to 1 other carbon atom

